WHAT IS CLAIMED IS:

1.   A signal processing apparatus comprising:

     means for converting a data stream containing audio packs

5   into packets each having a given area assigned to real data, the audio

packs storing PCM multiple-channel audio contents information;

and

     means for enabling channel information and a portion of the

audio contents information to be placed in adjacent portions of the

10   given area respectively, the channel information corresponding to

the portion of the audio contents information.

2.   A signal processing apparatus comprising:

     means for receiving packets each having a given area assigned

15   to real data, the packets resulting from conversion of a data stream

containing audio packs storing PCM multiple-channel audio

contents information, channel information and a portion of the

audio contents information being placed in adjacent portions of the

given area respectively, the channel information corresponding to

20   the portion of the audio contents information; and

     means for decoding the channel information.

3.   A method of signal transmission, comprising the steps of:

     converting a data stream containing audio packs into packets

25   each having a given area assigned to real data, the audio packs

storing PCM multiple-channel audio contents information;

enabling channel information and a portion of the audio contents information to be placed in adjacent portions of the given area respectively, the channel information corresponding to the portion of the audio contents information; and

5   transmitting the packets via a serial interface.

4. A signal transmission medium comprising:

means for converting a data stream containing audio packs into packets each having a given area assigned to real data, the audio

10 packs storing PCM multiple-channel audio contents information;

means for enabling channel information and a portion of the audio contents information to be placed in adjacent portions of the given area respectively, the channel information corresponding to the portion of the audio contents information; and

15   means for transmitting the packets from a transmission side to a reception side via a serial interface.

5. A signal processing apparatus comprising:

means for converting a data stream containing an audio data

20 stream into packets each having a given area assigned to real data, the audio data stream storing audio data resulting from a compression process; and

means for enabling compression information to be placed in the given area, the compressing information representing a type of

25 the compression process.

6.   A signal processing apparatus comprising:

means for receiving packets each having a given area assigned to real data, the packets resulting from conversion of a data stream containing an audio data stream storing audio data resulting from a

5   compression process, compression information being placed in the given area, the compression information representing a type of the compression process; and

means for decoding the compression information.

10   7.   A method of signal transmission, comprising the steps of:

converting a data stream containing an audio data stream into packets each having a given area assigned to real data, the audio data stream storing audio data resulting from a compression process;

enabling compression information to be placed in the given

15   area, the compression information representing a type of the compression process; and

transmitting the packets via a serial interface.

8.   A signal transmission medium comprising:

20   means for converting a data stream containing audio packs into packets each having a given area assigned to real data, the audio packs storing audio data resulting from a compression process;

means for enabling compression information to be placed in the given area, the compression information representing a type of

25   the compression process; and

means for transmitting the packets from a transmission side

to a reception side via a serial interface.

9. A signal processing apparatus comprising:

means for converting a data stream containing audio packs

5 into packets each having a given area; and

means for enabling at least one of a down sampling flag, a

down mix flag, and a dequantization flag to be placed in the given

area.

10 10. A signal processing apparatus as recited in claim 9, further

comprising means for down-sampling and dequantizing main data

into processing-resultant data, means for receiving a transmission

request, and means for loading the packets with the processing-

resultant data and transmitting the packets in response to the

15 received transmission request.

11. A signal processing apparatus comprising:

means for receiving packets each having a given area, the

packets resulting from conversion of a data stream containing audio

20 packs, wherein at least one of a down sampling flag, a down mix

flag, and a dequantization flag is placed in the given area; and

means for decoding the at least one of the down sampling flag,

the down mix flag, and the dequantization flag.

25 12. A method of signal transmission, comprising the steps of:

converting a data stream containing audio packs into packets

each having a given area;

enabling at least one of a down sampling flag, a down mix flag, and a dequantization flag to be placed in the given area; and

transmitting the packets via a serial interface.

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13.   A method as recited in claim 12, further comprising the steps of down-sampling and dequantizing main data into processing-resultant data, receiving a transmission request, and loading the packets with the processing-resultant data and transmitting the

10   packets in response to the received transmission request.

14.   A signal transmission medium comprising:

means for converting a data stream containing audio packs into packets each having a given area;

15   means for enabling at least one of a down sampling flag, a down mix flag, and a dequantization flag to be placed in the given area; and

means for transmitting the packets from a transmission side to a reception side via a serial interface.

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15.   A signal processing apparatus comprising:

means for converting a data stream containing audio packs into packets each having a given area assigned to real data, the audio packs storing audio data resulting from an encoding process; and

25   means for enabling encoding information to be placed in the given area, the encoding information representing a type of the

encoding process.

16.   A signal processing apparatus comprising:

means for receiving packets each having a given area assigned

5   to real data, the packets resulting from conversion of a data stream

containing audio packs storing audio data resulting from an

encoding process, encoding information being placed in the given

area, the encoding information representing a type of the encoding

process; and

10   means for decoding the encoding information.

17.   A method of signal transmission, comprising the steps of:

converting a data stream containing audio packs into packets

each having a given area assigned to real data, the audio packs

15   storing audio data resulting from an encoding process;

enabling encoding information to be placed in the given area,

the encoding information representing a type of the encoding

process; and

transmitting the packets via a serial interface.

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18.   A signal transmission medium comprising:

means for converting a data stream containing audio packs

into packets each having a given area assigned to real data, the audio

packs storing audio data resulting from an encoding process;

25   means for enabling encoding information to be placed in the

given area, the encoding information representing a type of the

encoding process; and

means for transmitting the packets from a transmission side to a reception side via a serial interface.

5   19.   A signal transmission medium as recited in claim 18, wherein the encoding process comprises a 1-bit DSD encoding process.

20.   A signal transmission medium as recited in claim 14, wherein the down sampling flag indicates halving an original sampling

10   frequency.

21.   A signal transmission medium as recited in claim 8, wherein the compression information comprises information representing that DSD encoded data are compressed by a predetermined

15   compression process.